

REMARKS

Claims 1-44 and 53-60 are currently pending in the application. During a telephone conversation on 10/13/04 with the Examiner, a provisional election of the claims of Group I (claims 1-44 and 53-59) was made in order to facilitate prosecution. With this response, Applicant hereby affirms the election of the claims of Group I without traverse. Accordingly, claims 45-52 are cancelled with this response without prejudice or disclaimer.

Applicant further notes with appreciation the provisional allowance of claims 7, 16, 17, 19, 22, 33, 39-42, 44, and 59. Claim 59 has been amended into independent form, and is now believed to be in condition for allowance. Claim 1 has been amended to include the limitations of claim 11, and claim 11 has been cancelled. Claims 12, 24, 28, and 53-58 have also been amended to more clearly define the present invention. Claim 60 has been added, and no new matter has been added. Reconsideration of the application in light of the following remarks is respectfully requested.

I. REJECTION OF CLAIMS 53-59 UNDER 35 U.S.C. §112, SECOND AND SIXTH PARAGRAPHS

Claims 53-59 were rejected under 35 U.S.C. § 112, second and sixth paragraphs, for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. More particularly, the term "means" was included in claims 53-59, wherein the claims were rejected as indefinite and unclear.

Claims 53-58 have been amended to remove the term "means", and to more clearly define the present invention. Accordingly, claims 53-58 are now believed to be in condition for allowance. Claim 59 was also provisionally allowed by the Examiner. Applicant has amended claim 59 into independent form and removed the term "means", and claim 59 is now believed to be in condition for allowance. Accordingly, withdrawal of the rejection of claims 53-59 is respectfully requested.

II. REJECTION OF CLAIMS 1-6, 8-15, 18, 20-21, 23-29, 31-38, 43, AND 53-58
UNDER 35 U.S.C. §103(a)

Claims 1-6, 8-15, 18, 20-21, 23-29, 31-38, 43, and 53-58 were rejected under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent 5,602,720 (Natsuhara et al.) in view of U.S. Patent 5,161,093 (Gorczyca et al.) or U.S. Patent 5,745,984 (Cole, Jr., et al.). Claim 1 has been amended to incorporate the limitations of claim 11, and claims 12, 24, 28, and 53-58 have been amended to more clearly define the present invention. Claim 11 has been cancelled with this response. Withdrawal of the rejection is requested for at least the following reasons.

- i. The references do not teach dissimilar coefficients of thermal expansion associated with the respective base and circuit board, as recited in claims 1 and 53.***

Claims 1 and 53 recite dissimilar coefficients of thermal expansion between the base and circuit board. For example, claim 1 recites the base being associated with a first coefficient of thermal expansion and the circuit board being associated with a second coefficient of thermal expansion, wherein the first and second coefficients of thermal expansion are dissimilar. Natsuhara et al. are silent regarding a coefficient of thermal expansion of either the metallic base or the ceramic plate. Natsuhara et al. describe a thermal conductivity of said metallic base and ceramic plate, however, ***the thermal conductivity described by Natsuhara et al. is not a coefficient of thermal expansion.***

Thermal conductivity and a coefficient of thermal expansion are separate and distinct properties of a material. Thermal conductivity is the quantity of heat that passes through a plate per unit time per unit area of the plate, when opposite faces of the plate are subject to a temperature gradient (e.g., expressed in terms of W/mK). A coefficient of thermal expansion (CTE), however, is the change in length per unit length of a material for a one degree change in temperature (e.g., expressed in terms of 10^{-6} mm/mm/°C). ***Natsuhara et al. are silent regarding a coefficient of thermal***

expansion of either the ceramic plate or metallic base, and a relationship between coefficients of thermal expansion of the metallic base and ceramic plate is not inherently evident.

Gorczyca et al. and Cole, Jr. et al. are also silent regarding such a coefficient of thermal expansion. Therefore, a combination of the teachings of Natsuhara et al. with the teachings of either Gorczyca et al. or Cole, Jr. et al. does not teach the present invention. Accordingly, withdrawal of the rejection of claims 1-6, 8-10, 12-15, 18, and 20-21, and 53-58 is respectfully requested. Furthermore, provisionally allowed claims 7, 16, 17, 19, and 22 are believed to be in condition for allowance in their present form, since said claims depend on claim 1, which is believed to be in condition for allowance for at least the above reasons.

ii. The references fail to teach or suggest the base comprising one or more secondary structures, as recited in claim 23.

Claim 23 recites a metal base comprising a pair of flanges and one or more secondary structures which extend outwardly from the first surface of the channel portion. Neither Natsuhara et al., nor Gorczyca et al. or Cole, Jr. et al. teach or suggest such secondary structure(s). Therefore, claim 23 is non-obvious over the cited art, and withdrawal of the rejection of claims 23-29, 31-38, and 43 is respectfully requested. Furthermore, since claim 23 is believed to be in condition for allowance for at least the above reasons, provisionally allowed claims 33, 39-42, and 44 are also believed to be in condition for allowance in their present form, since they depend on claim 23.

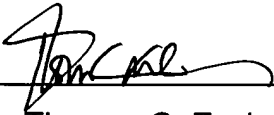
III. CONCLUSION

For at least the above reasons, the claims currently under consideration are believed to be in condition for allowance.

Should the Examiner feel that a telephone interview would be helpful to facilitate favorable prosecution of the above-identified application, the Examiner is invited to contact the undersigned at the telephone number provided below.

Should any fees be due as a result of the filing of this response, the Commissioner is hereby authorized to charge the Deposit Account Number 50-1733, SWEIP101US.

Respectfully submitted,
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CERTIFICATE OF MAILING (37 CFR 1.8a)

I hereby certify that this paper (along with any paper referred to as being attached or enclosed) is being deposited with the United States Postal Service on the date shown below with sufficient postage as first class mail in an envelope addressed to: Mail Stop Amendment, Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

Date: January 12, 2005


Christine Gillroy